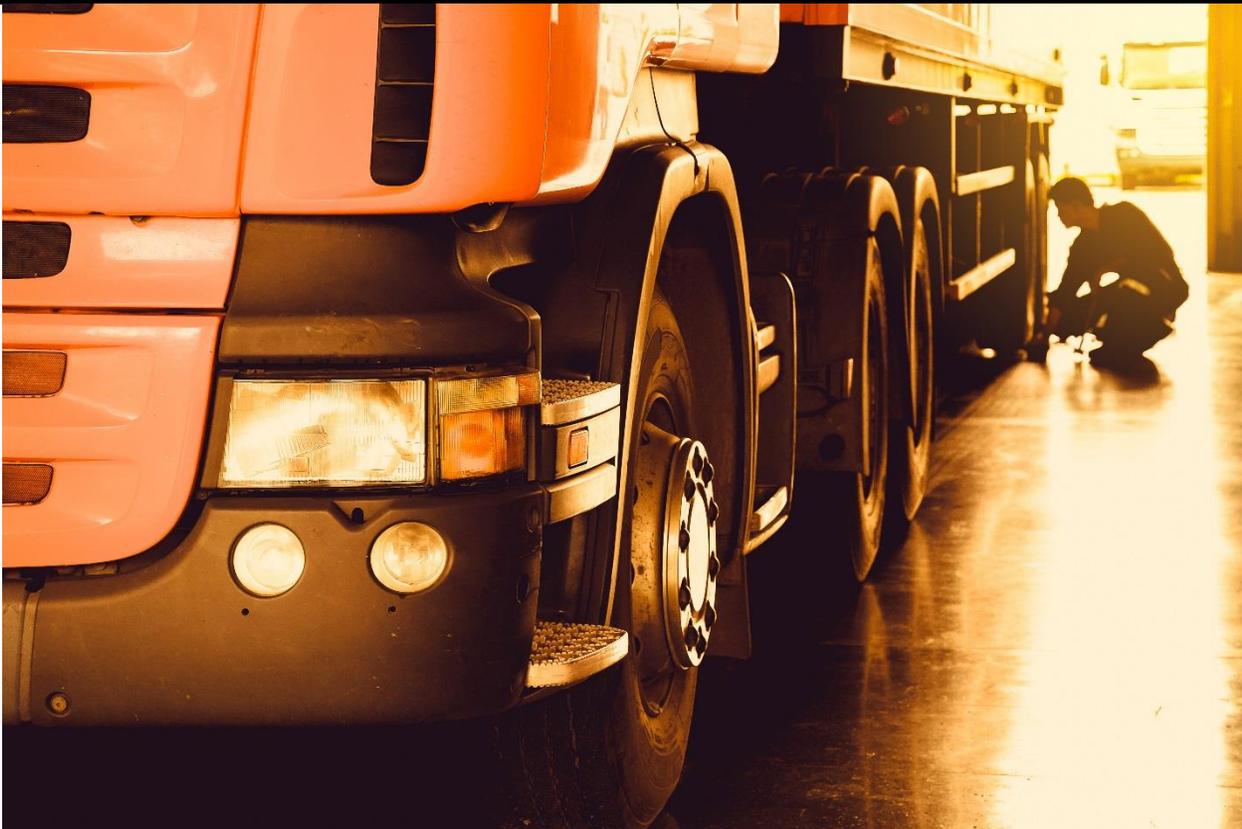


NCS4 Best Practices Report

Vehicle Ramming Incidents and Perimeter Protection



August 2017

Authored by Elizabeth Voorhees
The National Center for Spectator Sports
Safety and Security

NCS⁴



Introduction

The sports and entertainment industry is facing the possibility of vehicle ramming attacks, a trending terrorist tactic requiring minimal training, skill, or preparation time. Nice, Berlin, and Ohio State are all examples of the rising number of vehicle ramming attacks targeted toward large public gatherings. In the past week, two more vehicle ramming incidents have made international headlines.

On Saturday August 12th, a man drove his car into a crowd during a contentious protest in Charlottesville, VA, killing one and injuring 19 others. In Spain, at least 100 individuals were hurt and 14 were killed after a van plowed into a crowd of people in a popular tourist area in Barcelona. Both incidents have been determined by government officials as acts of terrorism.

Sport and entertainment venues host many high profile events that attract annual participation from thousands of spectators, which provides an opportune target for mass casualty incidents. Heighten security efforts stemming from the incidents of September 11th, 2001 renewed interest in developing formalized emergency preparedness plans and procedures. In the post 9/11 context, the vulnerability of sport and entertainment events to acts of terrorism was exposed in the 2013 Boston Marathon bombing, the 2015 attacks in Paris, including Stade de France, and the 2016 suicide bombing at Manchester Stadium.

As terrorist tactics continue to evolve, it is essential that the sports security workforce continuously analyze potential vulnerabilities at their event venue(s). This paper provides a brief overview of trends in vehicle ramming incidents. It also includes results from the 2016 Intercollegiate Athletics Safety and Security Best Practices Compliance Survey. The results of the survey provide information on the implementation rates (%) of perimeter protections. Specifically, this paper investigates the rise in vehicular-ramming attacks in large public gathering spaces and provides empirical evidence to indicate that increased protectionist measures are needed to secure sport and entertainment venues.

Background

Sport and entertainment venues are not exempt from terrorist threats and other forms of crisis. Due to the large numbers of attendees, as well as the public nature of spectator events, there are a host of risks and potential threats associated with sport and entertainment venues. Implementing protective measures to effectively manage risk and enhance emergency preparedness by reducing vulnerabilities can increase resiliency and minimize the potential threats to sport venues.

The Islamic State's (ISIS) online magazine *Rumiyah* features various suggestions to the group's sympathizers for terror operations. Last year, the magazine promoted propaganda known as "Just Terror Tactics," a recurring section of the magazine, which called for the use of truck and knife attacks. The vehicle intrusion and stabbing rampage at Ohio State University (September 2016) occurred one month after this publication was released and appears to have been the inspiration behind the attack.

The truck ramming attack in Nice (July 2016) killing at least 84 and injuring 256, and in Berlin (December 2016) killing 12 and injuring 50 others, reflect a change in ISIS tactics, both in chosen target and method. It is no longer necessary for violent extremists to gain access inside of venues when they can cause equal or greater destruction by targeting crowded public spaces. The most recent events in Charlottesville and Barcelona indicate that mass gatherings of people, like crowds of protestors or highly populated tourist streets, make for suitable targets for vehicle ramming attacks.

Vehicle ramming attacks have increased significantly over the past few years. In 2016 there were over 600 people injured or killed from vehicle ramming attacks worldwide. In comparison, from 2006-2014 there were an estimated 82 injuries and fatalities from these sort of attacks. Until the Barcelona and Cambrils attacks this week, the vehicle ramming attack that occurred in Nice, France caused more fatalities and injuries than all other prior incidents combined.

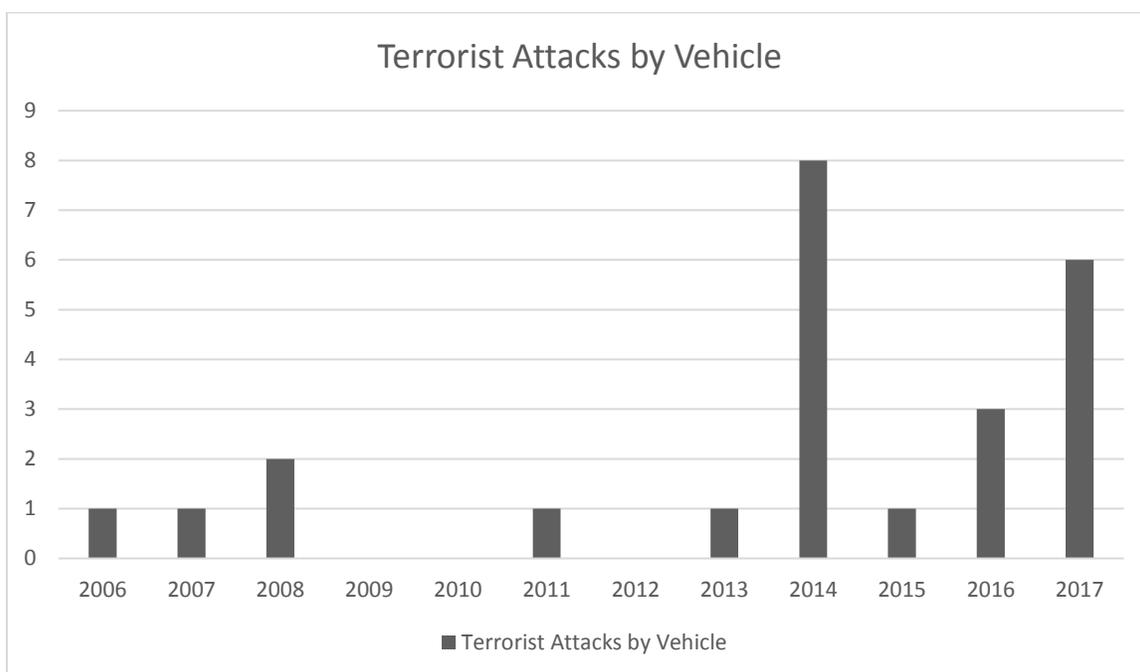


Figure 1. *The number of terrorist attacks by vehicle worldwide collected from open source data.*

As the number of vehicle ramming incidents continues to rise, the sport event security management workforce must evaluate current perimeter protection practices and identify areas for improvement in their security operations. Specifically, attention should be given to traffic management and crowd control issues. Other aspects may include facility design elements (i.e. bollards, fencing, enclosures), parking lots and other parking structures, and designated tailgating or “fan experience” areas.

Best Practices Compliance- Methodology

The tables below present data collected from individuals working in intercollegiate athletics who are responsible for the creating and fulfilling safety and security policies and procedures at collegiate institutions nationwide. Using the third edition (2016) of the Intercollegiate Athletics Safety and Security Best Practices Guide, the compliance survey measured the implementation rate of each proposed *best practice*. The scope of this paper considers only those best practices that pertain to protecting sport venues and events from vehicle intrusion and/or vehicular-ramming attacks.

To test the best practice metrics, the researchers surveyed 1,945 individuals working in intercollegiate athletics. The participant population was comprised of representatives from law enforcement, athletics, emergency management, venue/facilities management, and public safety. Participant response ratings were calculated by percentage and indicate compliance to the recommended best practice. The following scale shows how each best practice has been rated:

Best Practice Response Rates	
Scale	Level of Recommendation
100%-80%	Highly Recommended
80%-60%	Recommended*
60% and below	Needs Further Research**

Note: Asterisks (*) are included next to each metric to denote the level of recommendation.

Qualitative analysis was conducted on metrics that received a rating of 60% and below. When participants responded “No,” indicating that the best practice is not followed or implemented, they were directed to answer a follow-up question to explain the reason for non-compliance. Possible explanations for non-compliance include: lack of resources, lack of funding, philosophical, management buy-in, responsibility of local public safety agencies, and other.

*The full 2016 *Intercollegiate Best Practices Compliance Survey* is available upon request.

Best Practices in Addressing Vehicular Management

The following best practices address issues related to perimeter protection, vehicular screening, and crowd movement. There are numerous other best practices that contribute to the formation of sound risk management and emergency response capabilities that may assist in dealing with vehicular intrusion/vehicular ramming incidents. Please visit www.ncs4.com to download a free copy of the 2017 Best Practices for *Intercollegiate Athletics, Marathon and Running Events, Commercial Sport and Entertainment Facilities, and Interscholastic Athletics and After-School Activities*.

Perimeter Control/ Protection	
Does your organization arrange to have marked police vehicles patrol or parked randomly outside critical facility assets on game day or during events?	88.33%
Is your organization implementing protective measures for soft target areas within the middle and outer perimeters?	59.66%**
Is your organization maintaining emergency ingress/ egress routes for public safety vehicles or have these identified in your event plan?	87.29%
Pre-Event Inspection	
Is your organization maintaining emergency ingress/ egress routes for public safety vehicles or have these identified in your event plan?	81.36%

Vehicular	
Does your organization allow only authorized or credentialed vehicles that have been screened to be parked within the MIDDLE or INNER perimeters?	67.86%*
Is your organization inspecting and credentialing (labeling) ALL (including public safety) vehicles allowed inside the MIDDLE or INNER perimeters? <i>Are the vehicle checks conducted by trained staff?</i>	43.75%** 83.67%
Are all deliveries (entires and exits) pre-scheduled and documented?	53.64%**
Are all trucks and delivery vehicles seeking access to the INNER, MIDDLE or underground parking inspected visually and with undercarriage inspections for hazardous materials, weapons, and explosives?	31.82%**
Are parking areas monitored to ensure that lanes and parking areas are left open for EMS and fire vehicles?	93.64%
Is your organization removing all unauthorized or unidentified vehicles within the defined perimeters as part of the inspection process prior to opening the gates?	74.55%*

Tailgating	
Does your organization have specific areas for tailgating that are separate from general parking? <i>Is your organization prohibiting tailgating in general parking areas?</i>	56.32%** 40.82%**

Movement	
Has your organization developed a detailed plan for vehicular flow into and out of your various venues, including staging and entry/exit of responding emergency vehicles?	87.88%
Street Closures/Barricades	
Is your organization implementing mobile barriers around the areas immediately adjacent to the stadium/ arena?	61.22%*
Parking	
Are all parking areas under campus oversight staffed and controlled or at a minimum patrolled?	93.81%
Are all lots patrolled or staffed from the time the arena lot gates open until parking areas close following conclusion of the game?	70.10%*

What protective measures does your organization employ around exposed utilities? Check all that apply:	Response
Fencing	76.29%
Bollards	55.67%
Enclosure	55.67%
Other: <i>(trained volunteers, barricades, traffic cones)</i>	12.37%

Results

The results of the 2016 Intercollegiate Athletics Safety and Security Best Practices Compliance Survey indicate that, while many Universities are implementing protective measures to reduce the risk of vehicle intrusions, there are several areas where improvements should be made. Enhancing protective measures for the middle perimeter is the first step in mitigating risks for vehicle intrusions in areas where crowds gather such as tailgating areas. For vehicles allowed in the middle and inner perimeters, such as waste removal or food delivery trucks, credentialing should be performed to identify drivers and verify that approval was granted prior to the event.

Separating tailgating areas from general parking can be a challenge for many venues. Sport event security management professionals should conduct a risk assessment of these areas prior to any event to identify vulnerabilities and ensure appropriate protective barriers are in place wherever possible. These “soft target” areas are difficult to secure, which make them a suitable target for vehicle intrusions or ramming attacks. Deploying physical protection systems, both mobile and fixed, can help safeguard pedestrian walkways and tailgating zones.

Discussion and Implications

The data gathered by the National Center for Spectator Sports Safety and Security has highlighted the cause for concern regarding the protective measures currently employed to prevent vehicle intrusion and vehicle ramming attacks. Further research is needed to identify new security and risk management practices currently being used to deter such incidents from occurring.

Additional resources on vehicle attacks can be accessed on NCS4 CONNECT